

Advancing the Management of Paediatric Growth Hormone Deficiency: The 4W's and the Role of Digital Health and Patient Support

By Paul Dimitri; Indraneel Banerjee; Marta Ciaccio; Antonio De Arriba; Sandro Loche; Azriyanti Anuar Zaini; Abel López-Bermejo; In-Hyuk Jung,; Bassam Saleh Bin-Abbas; Edoardo Vergani; Ekaterina Koledova.



Presented by Prof. Paul Dimitri, paul.dimitri@nhs.net

Professor of Child Health Technology, Director NIHR HealthTech Research Centre in Paediatric and Child Health , UK

Disclosures

**Professor of Child Health Technology Consultant
in Paediatric Endocrinology Director, the NIHR
HealthTech Research Centre in Paediatrics and
Child Health Sheffield, United Kingdom**

Prof. Paul Dimitri
UK



Prof. Dimitri has received honoraria for Lectures and Advisory Boards from Merck Healthcare KGaA and receives research funding from NIHR and MRC UK

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Understanding Paediatric Growth Hormone Deficiency (GHD)

- Definition: Paediatric GHD is caused by insufficient growth hormone secretion, impairing growth and development.
- Prevalence: Affects ~1 in 4,000 to 10,000 children globally.
- Causes: Congenital (genetic) or acquired (injury, tumours).
- Impact if Untreated: Short stature, delayed puberty, metabolic issues.
- Early diagnosis and intervention are crucial for optimal growth and metabolism
- Treatment: Daily/weekly rhGH injections with continuous monitoring.

The Patient Journey in GHD Treatment



**STARTING THE JOURNEY:
DIAGNOSIS, EMOTIONAL
ADJUSTMENT, INJECTION
INITIATION.**



**ADAPTATION PHASE:
LEARNING TECHNIQUE,
FAMILY DYNAMICS, EARLY
ADHERENCE.**



**ONGOING MANAGEMENT:
MONITORING GROWTH,
ADJUSTING DOSES,
MANAGING SIDE EFFECTS.**



**TRANSITION TO ADULT CARE:
TREATMENT
DISCONTINUATION RISK,
STRUCTURED HANDOVER
NEEDED.**



Integrated Connectivity

Enables improved treatment adherence and persistence through real-time, integrated connectivity²



Personalization Features

For children via appealing color schemes and avatars



Easier to Train and Learn²

Step by step on-screen guided injection steps¹



Adjustable Comfort Settings

Adjustable injection speed, depth and time to maximize patients comfort and minimize pain³



Dose Logging & Injection Tracking

Injection reminders via separate smartphone application



Precise and Preset Dosing⁴

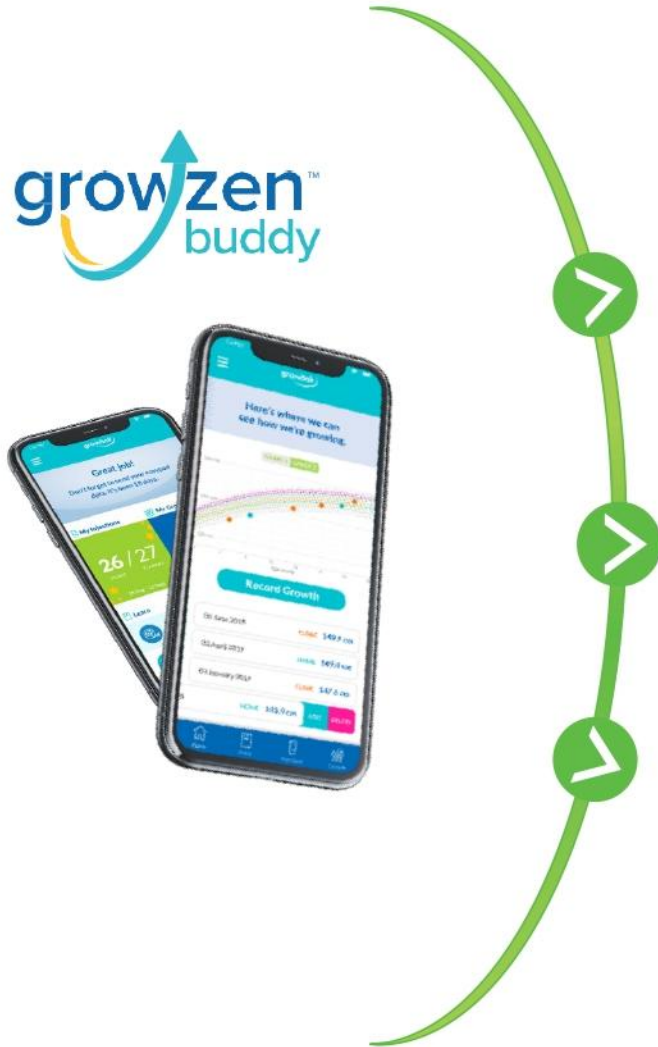
Step by step on-screen guided injection steps



Digital Support



Growzen buddy



Track treatment

- Track daily injection
- Statistics of adherence over longer periods
- Receive notifications and reminders



Learn library

- Inform patient
- Coach toward optimal adherence

Track progress

- Track growth and weight gain
- Keep engaged with treatment



The 4 W's



The 4 W's in Advancing GHD Care

Who?

Who Needs the Most Support:

-
- Newly diagnosed children, those with injection fear (29% at initiation), adolescents.
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- Children from split households, with multiple hormone deficiencies, or travel
-
- Youths in transition to adult care.
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Tailored Support: Emotional, educational, and practical interventions at key risk phases.

The 4 W's in Advancing GHD Care

What, When & How

What Are the Pressing Issues: Adherence, family engagement, HCP time constraints.

When & How to Intervene:

- Early phase critical (first 2 months).

- Digital tools: Growth & IGF1 tracking, reminders, personalized feedback.

- Combine digital tools & Patient Support Programs (PSPs).

The 4 W's in Advancing GHD Care — **Why** Intervene?



Early detection of non-adherence & psychosocial issues.



Real-world data & AI enable personalized care.



Utilizing data from the connected injection device



Digital PSPs (e.g. TuiTek®) enhance engagement and education.



Key Findings & Conclusions

- Certain groups need extra support.
- Adherence is the core challenge.
- Early, personalized intervention improves outcomes.
- Digital tools & human PSPs enhance care.
- Real-world data & AI enable proactive management.
- A patient-centric approach combining digital tools, insights, and human support optimizes paediatric GHD care.